

It should be noted that in a past period, prior to white settlement, a high water level, considerably higher than today, must have obtained. This is indicated by the occurrence of a shell marl at a higher level than the present high-water mark of Butler's Swamp.

The facts discussed in this paper, however, show that very important changes in the natural environment may take place within a period of a few years.

LIVING OFF THE LAND

By W. H. BUTLER, Inglewood.

In this article I propose dealing with plant and animal foods available in the bush of the South-west, with some notes on their preparation. All the foods mentioned have been eaten by myself, with the exception of a few which are added on well-supported evidence.

PLANT FOODS

A rule of thumb regarding plant foods is to place a small portion of the plant on the tip of the tongue. If the skin of the lips or tongue is irritated, the plant may be rejected as harmful.

Exotic Species

Watercress (*Nasturtium officinale*): Eat the leaves and stems raw or boiled.

Asparagus (*Asparagus officinalis* var. *atilis*): Eat the shoots raw or boiled before they colour, otherwise there is an unpleasant taste of aniseed. The ferny leaves of the adult plant may be crushed and used as a game lure owing to the aniseed smell. This domestic plant has run wild extensively along the Wooroloo Brook.

Nettle (*Urtica dioica*): Eat the boiled stems, leaves and shoots. Singe the leaves in a flame.

Grasses—Buffalo, Couch and Kikuyu: Eat the underground shoots raw or boiled. Green grass can be boiled and the water drunk. The substance itself is useless as food as the human digestive system cannot deal with the cellulose.

Wild Oats (*Avena barbata*) and Barley Grass (*Hordeum murinum*): Crush the seeds for cereal and boil.

Wild Turnip and Wild Radish: Eat the boiled roots. The young plant centres can be eaten raw or boiled. These species are particularly prevalent along railway lines.

Guildford Grass (*Romulea rosea*): The green seed pods ("puddings") may be eaten raw.

Indigenous Species

Blackboy (*Xanthorrhoea* spp.): Eat the soft white bases of the crown and flower stalks, raw or boiled.

Gum-trees (*Eucalyptus* spp.): Seeds of some, such as the Marri (*E. calophylla*) can be eaten raw. The elastic skin on the young tips can be chewed to relieve thirst.

Banksia (*Banksia* spp.): Eat the young terminal buds raw. Dip the flower cones in water and suck for nectar.

Native Pear, etc. (*Xylomelum* and *Hakea* spp.): Eat the raw seeds after peeling.

Manna Wattle (*Acacia microbotrya*): The gum may be chewed to relieve thirst.

Jam (*Acacia acuminata*): The seeds may be crushed for flour.

Yams (*Dioscorea hastifolia*): Yams should be treated with care unless absolute knowledge of their edibility is gained. This yam is identified as a vine bearing oval or round *parallel*-veined leaves. The root tubers should be dug and tasted; if acrid they should be sliced across the grain and washed in flowing water; if stringy they should be pounded or grated. Bake or boil.

Note: All underground root foods must be cooked.

Quondong (*Santalum acuminatum*): The ripe red fruit may be eaten raw or boiled. The kernels of the nuts are edible, raw or roasted.

Cranberries (*Astroloma* and *Leucopogon* spp.): There are at least five edible species but these must be known before they are eaten. Usually grow as small shrubs.

Snotty-gobble (*Persoonia* spp.): Eat the fruit raw or boiled.

Bracken Fern (*Pteridium aquilinum*): Eat the young curled fronds and shoots. The spring fronds are said to be sometimes poisonous.

Note: Because birds or mammals eat fruits or parts of plants it should not be accepted as evidence that they are edible for human beings. The classic examples are York Road and Box Poisons, the alkaloids of which are dangerous to man and some other mammals but the plants are eaten without risk by marsupials and Bronzewing pigeons (see "The Poison Plants of Western Australia," *Bull. No. 96, W.A. Department of Agriculture*).

ANIMAL FOODS

Some idea of cooking methods should be had regarding all varieties of animal food.

Camp oven or claybake: Wrap the body in clay or wet newspaper and bury it in hot ashes for 6 or 8 hours. Mammals cooked in this fashion should have the paunch removed, but birds, reptiles and fish may be left entire. The fur, feathers and scales adhere to the clay while the viscera roll into a ball.

Stew: Game is boiled over a slow fire with bread or flour as a thickening. A fast fire is a cause of toughness.

Grill: Cooking by direct contact with naked flames.

Dried meat: All game meat can be dried by first removing any fat and then smoke-drying it for about an hour, afterwards sun-drying it until all the moisture has gone. This biltong, as it is called, will keep indefinitely.

Land Vertebrates

All land vertebrates are edible, even if they may not be palatable. A warning should however, be given of the dangers of chewing the bones or eating any portion of the viscera of Bronzewing pigeons which are suspected of having fed on Box Poison or similar plants. Also game should be thoroughly cooked as it may

harbour intermediate stages of parasites that may be harmful to man.

Reptiles: The tail and legs of Goannas (*Varanus gouldii*) may be stewed, grilled or clay-baked. Smaller lizards may be stewed. Snakes may be treated the same as the Goanna, after removal of the head. Do not remove the skin of reptiles when clay-baking.

Fresh-water Animals

The hind legs of frogs (e.g., *Hyla aurea*) may be grilled.

Fish, such as Cobbler, Atherines, Minnows, etc., may be stewed, fried or clay-baked. The head of the cobbler should be removed. Lampreys may be parboiled and fried in their own fat or grilled.

Jilgies, Koonacs, Marron (*Cheraps spp.*) and fresh-water Shrimps (*Palaemonetes australis*) are boiled with salt in the usual manner of crustaceans. They may also be eaten raw.

Fresh-water mussels (*Westralunio ambiguum*) may be eaten raw or boiled, similarly to oysters. Care should be taken to remove the byssus.

Insect Foods

Bardies, the larvae of longicorn beetles (Family Cerambycidae) are prevalent in blackboys and are edible raw or grilled. Any larvae that show blue or black through the skin, such as those of cockchafer beetles (Family Scarabaeidae) or are hairy, should be discarded unless the internal organs are removed.

The eggs and larvae of ants are edible raw but have a curious taste.

Both native and introduced bees produce honey.

Some big wood moths can be eaten after the fur is singed off. Especially tasty are the gravid females.

THOMSON'S MULGA SNAKE

By L. GLAUERT, W.A. Museum, Perth

In 1933 Dr. Donald F. Thomson described the head of a large brown snake which had been killed at the East Alligator River, Arnhemland by Mr. P. Cahill, in 1914. It differed in certain features from the true Mulga Snake, *Pseudechis australis*, and therefore received the name of *Pseudechis platycephalus* (*Proc. Zool. Soc. Lond.*, 1933, pt. 4).

Dr. Thomson's specimen had aberrant features and as the head of a similar snake, eight feet long, killed on the Adelaide River flat by Lieutenant Commander L. C. Horsburgh has reached the Museum (reg. no. R9986) it is felt that a description will direct attention to the possible existence of this large deadly reptile in our far north as well as add to the original description.

Description: A large brown snake attaining a length of eleven feet, highly venomous and very aggressive. Head broad and flat tapering rapidly to the tip of the snout, slightly distinct from the neck, 36 mm. wide; canthus rostralis distinct; diameter of eye 6